IN THE CLAIMS:

Please AMEND claims 1-18 and ADD new claims 19 and 20 in accordance with the following:

1. (CURRENTLY AMENDED) A ~~M~~method ~~for~~ of evaluating a scattered light signal generated by a scattered light receiver when detecting especially fine particles in a carrier medium, ~~characterized in that~~the ~~scattered light signal runs~~comprising running the scattered light signal through a filter algorithm ~~step~~operation ~~for evaluating~~to evaluate the scattered light signal subject to specific filter algorithms, ~~and the scattered light signal is filtered differently in~~ the filter algorithm ~~step~~operation ~~depending~~being based on ~~its~~ a slope of the scattered light signal ~~prior to comparison with preset threshold values.~~

2. (CURRENTLY AMENDED) ~~Method in accordance with claim 1, characterized in that~~The method according to claim 1, wherein the scattered light signal is ~~further~~ run through a calibration operation~~step for calibration~~ to calibrate the scattered light signal with a reference signal ~~and/or~~, a drift compensation ~~step for adaptation~~operation to adapt the scattered light signal to prevailing environmental conditions over a time period of at least 24 hours, ~~and/or~~ a temperature compensation ~~step for compensating~~operation to compensate for the temperature dependency of the radiated light output of a light source, and/or a sensitivity adjusting ~~step for adaptation~~operation to adapt the scattered light signal to a required sensitivity.

3. (CURRENTLY AMENDED) The method according to claim 2~~Method in accordance with claim 2 having~~, wherein an integration amplifier acts as a scattered light amplifier, and wherein ~~characterized in that~~ the integration time of ~~said~~ the integration amplifier is set in the calibration ~~step~~operation such that the scattered light signal corresponds to a reference signal of a reference indicator.

4. (CURRENTLY AMENDED) ~~Method in accordance with claim 2 or 3~~The method according to claim 2, wherein ~~characterized in that~~the sensitivity of the scattered light receiver ~~(13)~~ is changed in the sensitivity adjusting ~~step~~operation by changing ~~the~~a pulse width of ~~the~~a drive current of a light source ~~(9)~~ associated with ~~said~~the scattered light receiver ~~(13)~~.

5. (CURRENTLY AMENDED) ~~Method in accordance with claim 2 or 3~~The method

according to claim 3,~~characterized in that~~ wherein the sensitivity of the scattered light receiver is changed in the sensitivity adjusting ~~step~~operation by changing the integration time of ~~an~~ the integration amplifier~~ acting as a scattered light signal amplifier~~.

6. (CURRENTLY AMENDED) ~~Method in accordance with claim 5~~The method according to claim 5, wherein ~~,characterized in that~~the changing of the integration time ~~ensues~~ is incremental~~ly~~ or continuous~~ly~~.

7. (CURRENTLY AMENDED) ~~Method in accordance with claim 4~~The method according to claim 4, wherein ~~,characterized in that~~ the changing of the pulse width ~~ensues~~is incremental~~ly~~ or continuous~~ly~~.

8. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 7~~The method according to claim 2, wherein~~,characterized in that~~ a temperature sensor ~~(23)~~ arranged in ~~the~~ a flow path ~~(7)~~ of the carrier medium is used for the temperature compensation in the temperature compensation operation of the scattered light signal~~ in the temperature compensation step~~.

9. (CURRENTLY AMENDED) ~~Method in accordance with claim 8~~The method according to claim 8, wherein ~~,characterized in that~~the temperature compensation operation comprises~~ensues by~~ changing ~~the~~a pulse width of ~~the~~a drive current of a light source ~~(9)~~ associated with the ~~said~~ scattered light receiver ~~(13)~~.

10. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 9~~The method according to claim 2, wherein~~,characterized in that~~ the scattered light signal is lowpass filtered when ~~its~~a slope thereof exceeds a pre-defined threshold.

11. (CURRENTLY AMENDED) ~~Method in accordance with one of claims 2 to 10~~The method according to claim 2, wherein ~~,characterized in that~~a chamber value is averaged over a relatively longer period of time in the drift compensation ~~step~~operation to create a tracked chamber value.

12. (CURRENTLY AMENDED) A ~~S~~scattered light detector ~~for carrying out the method~~

~~in accordance with one of claims 1 to 11~~, comprising:

~~having~~ a housing ~~(1),~~;

an inlet opening ~~(3)~~ and an outlet opening ~~(5)~~ in ~~said~~the housing ~~(1)~~, between which the carrier medium flows ~~through said housing (1) on~~ along a flow path ~~(7), having~~;

~~a~~ light source, ~~(9)~~ which directs light to a scattered light center ~~(11)~~ lying on the flow path ~~(7),~~;

~~having~~ a scattered light receiver ~~(13)~~ to receive ~~for~~ a portion of the light scattered on particles in the scattered light center ~~(11),~~; and ~~having~~

a scattered light signal amplifier ~~(17) for amplifying~~to amplify the scattered light signal, ~~wherein~~ the scattered light signal amplifier ~~(17) is~~being configured as an integration amplifier, ~~wherein~~~~characterized in that~~ a filter algorithm ~~step~~operation is provided ~~for filtering~~to filter the scattered light signal based on ~~its~~a slope thereof.

13. (CURRENTLY AMENDED) ~~Scattered light detector in accordance with claim 12~~The scattered light detector according to claim 12, wherein ~~,characterized in that~~switching means ~~(19,21)~~ are provided ~~for setting~~ to set the sensitivity of the scattered light receiver ~~(13)~~.

14. (CURRENTLY AMENDED) ~~Scattered light detector in accordance with claim 12 or 13~~The scattered light detector according to claim 12, ~~,characterized in that~~further comprising a communication interface~~, in particular to a PC or a network, is provided~~ to communicate with a desktop or a notebook PC.

15. (CURRENTLY AMENDED) The ~~S~~scattered light detector ~~in accordance with one of claims 12 to 14~~according to claim 12, ~~characterized in that~~ wherein a switch input is provided ~~for changing~~ to change the sensitivity of the scattered light receiver ~~(13)~~.

16. (CURRENTLY AMENDED) The ~~S~~scattered light detector ~~in accordance with one of claims 12 to 15~~according to claim 12, further comprising ~~,characterized in that~~a temperature sensor ~~(23) is~~ provided in the flow path ~~(7)~~ of the carrier medium.

17. (CURRENTLY AMENDED) The ~~S~~scattered light detector ~~in accordance with one of claims 12 to 16~~according to claim 12, further comprising~~,characterized in that~~ a flowmeter ~~(25) is~~ provided in the flow path ~~(7)~~ of the carrier medium.

18. (CURRENTLY AMENDED) The ~~S~~scattered light detector ~~in accordance with~~according to claim 17, ~~characterized in that~~wherein the flowmeter ~~(25) consists of~~comprises a thermoelectric air flow sensor and a thermoelectric temperature sensor.

19. (NEW) A method of evaluating a scattered light signal generated by a scattered light receiver when detecting relatively fine particles in a carrier medium, comprising running the scattered light signal through a calibration operation to calibrate the scattered light signal with a reference signal, a drift compensation operation to adapt the scattered light signal to prevailing environmental conditions over a predetermined time period, a temperature compensation operation to compensate for the temperature dependency of the radiated light output of a light source, and/or a sensitivity adjusting operation to adapt the scattered light signal to a required sensitivity.

20. (NEW) A method of evaluating a scattered light signal generated by a scattered light receiver when detecting relatively fine particles in a carrier medium, comprising at least one of calibrating the scattered light signal with a reference signal, adapting the scattered light signal to prevailing environmental conditions over a predetermined time period, compensating for the temperature dependency of the radiated light output of a light source, and/or adapting the scattered light signal to a required sensitivity.